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MCKENNA LONG & ALDRIDGE LLP			BELL, PAUL A	
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2675
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,559

Applicant(s)

BAEK ET AL.

Examiner

PAUL A BELL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/18/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because;

Figure 4, "SIGNAL PRESENCE COMPARATOR" has a reference number 48 but the specification on page 9 calls it 46 and also "SIGNAL ABSENSE COMPARATOR" has the reference number 46 but the specification calls it 48.

Appropriate correction is required.

Claim Objections

2. Claims 1-11 are objected to because of the following informalities:

With regard to embodiments represented in claims 1 and 7 the claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See MPEP § 1.58(a) and 1.75 (d)).

The applicant needs to add the claimed phrases; "**counting a number of contiguous non-alternating states**" and "**determining whether the number is greater than one**" from claim 1 to the specification.

The applicant needs to add the claimed phrases; "**counting a number of contiguous non-alternating states**" and "**determining whether the number is equal to at least two**" from claim 7 to the specification.

Appropriate correction is required.

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Priority

3. With regard to claims 1-11 the applicant is **not** entitled to the benefit of the filing date of a prior application filed in a foreign country. Applicant is reminded that in order to obtain the benefit of priority based on priority papers filed in an Application the U.S. application must be an application for a patent for an invention which is also disclosed in the prior foreign application in the disclosure **or claims** of foreign application (note the claims in your prior foreign application are clearly different and do not teach "counting a number" or "number is greater than one" or "number is equal to at least two") .

Note this was only made an issue for possible consideration by examiner as a result of applicant providing a translation of foreign priority document for his review in order to overcome an art rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Baek (6,525,720).

With regard to claim 1 Baek teaches a method of driving in a display (column 1, lines 5-10) receiving an input signal having a first frequency (figure 4, "vertical sync

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signal”), generating an intermediate signal from the input signal (figure 4, “determining signal”); detecting whether the intermediate signal has contiguous alternating states; counting a number of contiguous non-alternating states if the intermediate signal does not have contiguous alternating states; and determining whether the number is greater than one (figure 3, item 28, column 5, lines 5-32).

With regard to claim 7 Baek teaches a method of driving a display comprising: receiving an input signal having a first frequency (figure 4, “vertical sync signal”); generating an intermediate signal from the input signal (figure 4, “determining signal”); determining whether the intermediate signal has contiguous alternating states; counting a number of contiguous non-alternating states if the intermediate signal does not have contiguous alternating states; and determining whether the number is equal to at least two (figure 3, item 28, column 5, lines 5-32)..

With regard to claim 2 Baek teaches the method according to claim 1, wherein the input signal includes a vertical synchronization signal (figure 3, “vertical sync signal”).

With regard to claim 3 Baek teaches the method according to claim 1, wherein the input signal includes a data enable signal (figure 3, “data enable”).

With regard to claim 4 Baek teaches the method according to claim 1, wherein a reference signal having a substantially the same frequency as the first frequency is used to determine whether the intermediate signal has contiguous alternating states (figure 4).

With regard to claim 5 Baek teaches the method according to claim 1, wherein the input signal is from a computer and is for a liquid crystal display (figure 1 item 10 and 2).

With regard to claim 6 Baek teaches the method according to claim 1, wherein the input signal is determined to have an error if the number is greater than one (column 5, lines 9-11 and column 6, lines 48-54).

With regard to claims 8-11 Baek was shown above in claims 7 and 2-6 to read on these limitations .

6. Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Akira (JP 9270936 A 14 October 1997).

With regard to claim 12 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (figure 1, item 1 "horizontal synchronization signal isolation part" the horizontal synchronizing signal which has "a first period"); determining whether the first period is less than a first reference period (figure 1, item 3 NTSC "a first reference period"); and outputting a signal of a first state if the first period is less than the first reference period (SEE figure 1, item 2, "synchronization detector" whereby for a "first state case" item 2 outputs specific signal value item "So" only when the "first period" equals the "first reference period". For the alternative "second state case" item 2 outputs a signal value "different" then "So" when the "first period" is not equal to the "first reference period" which clearly requires the state of the "first period" to be less than or greater than the "first reference period" and thereby clearly reads on this broad language).

With regard to claim 13 Akira teaches the method according to claim 13, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract and figure 1).

With regard to claim 14 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (figure 1, item 1 "horizontal synchronization signal isolation part" separate the horizontal synchronizing signal which has "a first period"); determining whether the first period is greater than a first reference period (figure 1, item 3 NTSC "a first reference period") and outputting a signal of a first state if the first period is greater than the first reference period (SEE figure 1, item 2, "synchronization detector" whereby for a "first state case" item 2 outputs specific signal value item "So" only when the "first period" equals the "first reference period". For the alternative "second state case" item 2 outputs a signal value "different" then "So" when the "first period" is not equal to the "first reference period" which clearly requires the state of the "first period" to be less than or greater than the "first reference period" and thereby clearly reads on this broad language).

With regard to claim 15 Akira teaches the method according to claim 14, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract and figure 1).

With regard to claim 16 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (figure 1, item 1 "horizontal synchronization signal isolation part"

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separate the horizontal synchronizing signal which has "a first period"); determining whether the first period is less than a first reference period and greater than a second reference period (figure 1, item 3 NTSC "a first reference period" and item 2 PAL/SECAM "a second reference signal"); and outputting a signal of a first state if the first period is less than the first reference period and greater than the second reference period (SEE figure 1, item 2, "synchronization detector" whereby for a "first state case" item 2 outputs specific signal value item "So" only when the "first period" equals the "first reference period" or "second reference period". For the alternative "second state case" item 2 outputs a signal value "different" then "So" when the "first period" is not equal to the "first reference period" or "second reference period" which clearly requires the state of the "first period" to be less than or greater than the "first reference period" or "second reference period" and thereby the reference clearly reads on this broad language).

With regard to claim 17 Akira teaches a method according to claim 16, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract and figure 1).

7. Claims 30 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi (6,329,975).

With regard to claim 30 Yamaguchi teaches a liquid crystal display device including; a timing controller (figure 3) provided with a signal presence determiner for detecting an application of an input signal from an interface (figure 3, item 11), wherein said signal presence determiner comprising: an oscillator for generating a reference clock having the same frequency as a horizontal synchronizing signal and a pre-

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synchronizing signal having the same frequency as a vertical synchronizing signal (figure 3, item 6); a period detector for comparing a data enable signal from the exterior thereof with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal (figure 3, item 11); *a period comparator for comparing a period range between a desired maximum value and a desired minimum value of the input signal* (SEE column 4, lines 45 –55; “if the data enable signal indicating the effective display data period is not detected for more than a constant period , a select signal is generated. For example , if the data enable signal indicating an effective display data period is not detected for a specific length of time or longer” note this reads on minimum to maximum because this clearly defines the “range” to be between a “specific length” and a value “longer” than the “specific length” therefore reads on the broad term “range”); and signal presence/absence comparing means for determining a presence/absence of the input signal in response to a pulse number of the input signal detected within a period range between the maximum value and the minimum value during an application interval of the detection reference signal (figure 3, items 8 and 9).

With regard to claim 33 Yamaguchi teaches a method of driving a liquid crystal display device including; a timing controller (figure 3) provided with a signal presence determiner for detecting an application of an input signal from an interface (figure 3, item 11), said method comprising the steps of: generating a reference clock having the same frequency as a horizontal synchronizing signal (figure 3, Dot Clock) and a pre-synchronizing signal having the same frequency as a vertical synchronizing signal

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(figure 3, item Vsp1); comparing a data enable signal from the exterior with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal (figure 3, items 11 and 9); *comparing a period range between a desired maximum value and a desired minimum value of the input signal*(SEE column 4, lines 45 –55; “if the data enable signal indicating the effective display data period is not detected for more than a constant period , a select signal is generated. For example , if the data enable signal indicating an effective display data period is not detected for a specific length of time or longer” note this reads on minimum to maximum because this clearly defines the “range” to be between a “specific length” and a value “longer” than the “specific length” therefore reads on the broad term “range”); and determining a presence/absence of the input signal in response to a pulse number of the input signal detected within a period range between the maximum value and the minimum value during an application interval of the detection reference signal (figure 3, items 8 and 9).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akira (JP 9270936 A 14 October 1997).

With regard to claim 18 Akira teaches a method of driving in a display (figure 1 and abstract): receiving a vertical synchronization signal, (SEE figure 1 video signal

“Vi” where it is inherent that the analog video signal NTSC or PAL/SECAM input into item 1 has a vertical and horizontal synchronization signal embedded into video signal. Now in figure 1 Akira illustrated an example of item 1 being a “horizontal synchronization signal isolation part” to receive the video signal Vi and to separate the “horizontal synchronizing signal” from it. It would have been obvious to one of ordinary skill that the horizontal synchronization signal in Akira could have been any periodic display related signal and therefore it would have been obvious to use a “vertical synchronization signal isolation part” instead of the “horizontal synchronization signal isolation part” because the principle of operation would not change), generating an intermediate signal from the vertical synchronization signal, the intermediate signal indicating whether the vertical synchronization signal has an error; and outputting a desired video signal to the display when the error is detected (SEE figure 1, item 2, “synchronization detector” whereby for a “first state case” item 2 outputs an “intermediate signal” which had a specific signal value item “So” only when the “first period” equals the “first reference period”. For the alternative “second state case” item 2 outputs a signal value “different” then “So” when the “first period” is not equal to the “first reference period” whereby item 5 switches the right signal in and displays the corrected video).

With regard to claim 24 Akira teaches a method of driving in a display (figure 1 and abstract): receiving a data enable signal (figure 1, items 1 and 2); generating an intermediate signal from the data enable signal, the intermediate signal indicating whether the data enable signal has an error; and outputting a desired video signal to

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the display when the error is detected (SEE figure 1, item 2, "synchronization detector" whereby for a "first state case" item 2 outputs an "intermediate signal" which had a specific signal value item "So" only when the "first period" equals the "first reference period". For the alternative "second state case" item 2 outputs a signal value "different" then "So" when the "first period" is not equal to the "first reference period" whereby item 5 switches the right signal in and displays the corrected video).

With regard to claims 19-23 and 25-29 Akira does not directly illustrate all the "obvious uses" for his video signal such as the video signal being all black, color, based on a previous image, a message or changes with time. However such recitations of what the content of the video data is merely directed towards an "OBVIOUS INTENDED USE" of the video signal whereby such recitations encompass all the standard well known functions of video data.

10. Claims 31, 32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (6,329,975).

With regard to claims 31, 32, 34 and 35 Yamaguchi does not directly illustrate the value for "period range" or "pulse number" being controlled by "a user" . However "the user" can be viewed broadly as the first user the one who programmed the device ,and it would be obvious that the programmer of Yamaguchi apparatus had some level of control for selecting these values.

Response to Arguments

11. Applicant's arguments filed 5/18/2004 have been fully considered but they are not persuasive.

The applicant argues on pages 3-4 with regard to claim 12 that Akira does not teach "outputting a signal of a first state if the first period is less than the first reference period" and with regard to claim 14 that Akira does not teach "outputting a signal of a first state if the first period is greater than the first reference period". And further with regard to claim 16 that Akira does not teach "outputting a signal of a first state if the first period is less than the first reference period and greater than the second reference period". The examiner disagrees and references the more detailed rejection of claims 12-16 above.

The applicant argues on pages 4-6 with regard to claim 30 that Yamaguchi does not teach, "a period detector for comparing a data enable signal from the exterior thereof with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre synchronizing signal" and *"a period comparator for comparing a period range between a desired maximum value and a desired minimum value of the input signal"*. The examiner disagrees and references the more detailed rejection above.

The applicant argues on pages 4-6 with regard to claim 33 that Yamaguchi does not teach, "comparing a data enable signal from the exterior with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal" and *"comparing a period range between a desired maximum value and a desired minimum value of the input signal"*. The examiner disagrees and references the more detailed rejection above.

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Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.

If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or Faxed to: (703) 872-9306


Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor
(Receptionist).



Paul Bell

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August 24, 2004


CHANH NGUYEN
PRIMARY EXAMINER